"Invisible Computing makes a splash at CES"

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The booth of Invisible Network (IN), a consortium of leading Portuguese companies and research teams, made a splash at the Consumer Electronics Show in Las Vegas with a new generation of interactive products based on traditional substrates used as screens (cork, paper, plastic, textile, wood, glass, leather and ceramics) and electrochromic inks (that change colour with the use of electrical current triggered by user interaction).

YDreams, the IN leader, used the term "invisible computing" to define the processes of activating and de-activating pre-programmed information layers, displaying animations and performing simple computations using electro-chromic inks. These are deposited on the substrates using inkjet printing along with conductive oxides, energy sources, and other electronic, chemical or biological sensors and processors. "Invisible computing" requires less energy, provides imagery with higher resolution and contrast and is faster than conventional computing for trivial visualization processes.

Examples of more than thirty "invisible computing" surfaces and objects displayed at the IN booth included:

- Amorim's (the world leader in the cork industry) interactive cork floor flashing way-finding information;
- A special edition of Time magazine with interactive graphics offered by Portucel (the world's largest printing paper manufacturer);
- Bi-silque's (a supplier of OfficeMax) ceramic white boards where calendars and calculators could be activated and de-activated;
- Plastic bottles that incorporate sensors and information displays and may change its shape, developed by Logoplaste (supplier of Coca-Cola and many other leading brands);
- Booth tables, provided by SONAE Industry (the number one maker of wood based panels), with interactive games available on the wood surface;
- Bottles of wine, offered by BA Glass (an Iberian powerhouse in the glass industry), that also offered interactive information;
- A new computer concept with code name SLICE, an ultra-thin A4 size device using a transparent plastic screen. SLICE, developed by YDreams and the nanotechnology branch of the CUF Group, Metoxid, combines conventional computing and "invisible computing". This configuration facilitates the optimization of time and energy and the introduction of new touch-based interfaces. But the SLICE most popular feature will be probably the use of the screen in non-digital light weight projecting devices similar to the slide projectors of the past. SLICE will be used as regular photographic slide enabling much less expensive projections.

IN includes research teams from the New University of Lisbon (materials science and photochemistry), and the above mentioned companies. M3 Design, Xennia, MIT

Center for Bits and Atoms and the Fraunhofer Institute are international institutions that cooperate with the IN Consortium.